TIN CERTIFICATION

Date Prepared: 9/19/2014

Roads to Resources – WRANGELL – Model Key Points TIN

Prepared by: McClintock Land Associates, Inc.
Prepared for: Tetra Tech, Inc.

I hereby certify that an independent ground survey was performed under my supervision to obtain sampling data to be used to test the reliability of the electronic Triangular Irregular Network (TIN) surface model for Wrangell, Alaska. This TIN is based on the Model Key Points Method. For ease of manipulation the surface model was divided into 32 cells as defined in the following .dwg files:

Dated 9/12/2014
L29575_16075-Surface-MKP.dwg
L29575_16100-Surface-MKP.dwg

Dated 9/15/2014
L29600_16050-Surface-MKP.dwg
L29600_16075-Surface-MKP.dwg
L29600_16100-Surface-MKP.dwg
L29625_16050-Surface-MKP.dwg
L29625_16075-Surface-MKP.dwg
L29625_16100-Surface-MKP.dwg
L29650_16025-Surface-MKP.dwg
L29650_16050-Surface-MKP.dwg
L29650_16075-Surface-MKP.dwg
L29675_16000-Surface-MKP.dwg
L29675_16025-Surface-MKP.dwg
L29675_16050-Surface-MKP.dwg
L29700_16025-Surface-MKP.dwg

Dated 9/15/2014
L29700_16050-Surface-MKP.dwg
L29700_16075-Surface-MKP.dwg
L29725_16025-Surface-MKP.dwg
L29725_16050-Surface-MKP.dwg
L29725_16075-Surface-MKP.dwg
L29750_16025-Surface-MKP.dwg
L29750_16050-Surface-MKP.dwg
L29750_16075-Surface-MKP.dwg
L29775_16025-Surface-MKP.dwg
L29775_16050-Surface-MKP.dwg
L29775_16075-Surface-MKP.dwg
L29800_16000-Surface-MKP.dwg
L29800_16025-Surface-MKP.dwg
L29800_16050-Surface-MKP.dwg
L29825_16000-Surface-MKP.dwg
L29825_16025-Surface-MKP.dwg
L29825_16050-Surface-MKP.dwg

These files were produced by Tetra Tech, Inc. from a LiDAR survey. The LiDAR data was acquired and calibrated by Aerial Surveys International on June 16, 2014 and processed by Tetra Tech, Inc. between July 11 and September 12, 2014.

The independent ground survey was performed by McClintock Land Associates, Inc. on May 2, 2014 using Static and RTK GPS methods as well as conventional optical methods. Topcon FC-250 & FC-236 Data Collectors, along with Topcon HiPer GA and GR-3 GNSS receivers were used as well as a Topcon GPT-3005LW Reflectorless Electronic Total Station. Topcon Magnet Field v2.0.1 data collection software was used for the field data collection and Topcon Magnet Office Tools v2.0.1 office software was used for post-processing and adjustments.

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The survey data was collected in Alaska State Plane Coordinates, Zone 1 (NAD83) in US Survey Feet. The vertical datum is NAVD88 in feet and elevations were determined as approximate orthometric heights using Geoid Model 2012A. Ties to the NSRS were made using the NGS OPUS Utility. A more detailed description of the methods and control will be contained in the Survey Report for this project.

This TIN was checked with a total of 9 independent QC check points which had been withheld from the TIN producer. The RMS error between the elevations returned from the TIN and the actual check points was 0.09 feet. This meets the standard for ASPRS Class 2 Maps for Vertical Accuracy for a 2 foot contour interval map.

William McClintock
Professional Land Surveyor
McClintock Land Associates, Inc.

9-19-2014
Date